



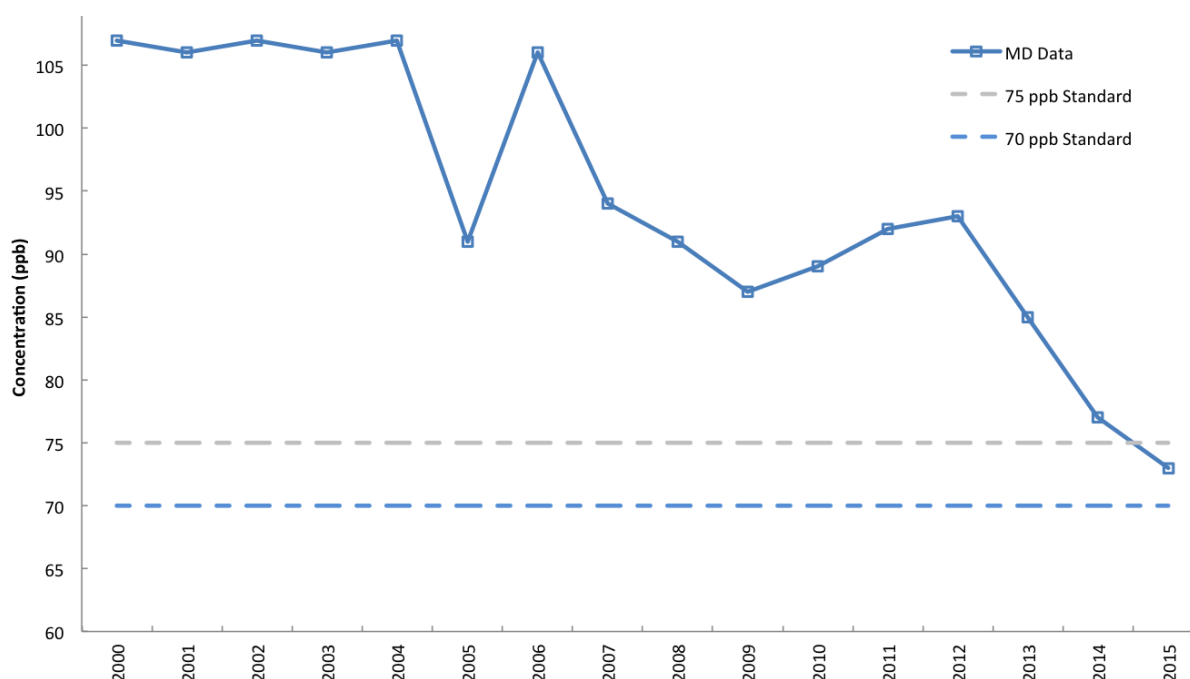
# Maryland 2016 Clean Air Progress Report

## Air Quality Continues to Improve

For the first time in 30 years, Maryland is very close to meeting all federal air quality standards. The Environmental Protection Agency (EPA) has determined that the Baltimore area is meeting the health based federal standard for ground level ozone air pollution. The Washington, DC and the Philadelphia nonattainment areas also have clean data and EPA is expected to make the formal “Clean Data Determination” in 2016. Maryland came into statewide attainment for fine particles in 2012 and fine particle levels continue to drop. EPA finalized a new ozone standard that begins an new planning process in 2017 with area designations. This more stringent ozone standard will present challenges for Maryland, but we feel we have a plan to address these challenges.

Maryland has adopted effective air pollution controls to address the pollution we generate in the State. Vehicles and fuels are cleaner. Utilities have invested billions of dollars in pollution controls. Toxic emissions from fuels, consumer products and industrial processes have been reduced which has resulted in Maryland’s air quality improving significantly in recent years. While beneficial weather patterns and cooler summer temperatures over the past several years have certainly played a part in reducing ground level ozone, emission reductions from Maryland’s air quality regulations have lessened the number of days on which Marylanders breathe unhealthy air. Sustained efforts from government, businesses, environmental advocates, scientists, health professionals and many others have brought cleaner air to Maryland and surrounding states. These improvements benefit public health, our quality of life and the economy.

## Maryland’s Improving Ozone Levels

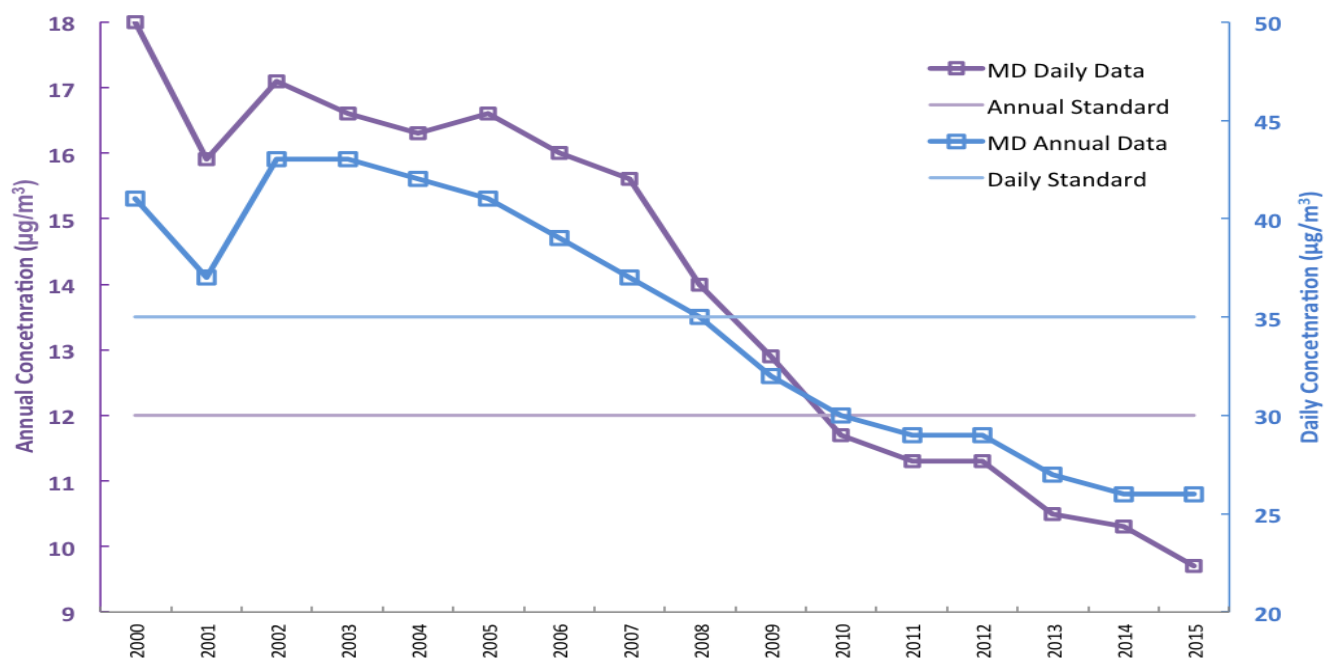


However, there is still work to be done to meet our air quality goals and to attain and maintain a new, stricter ground level ozone standard. The new ozone standard will improve public health protection, particularly for children, the elderly, and people of all ages who have lung diseases such as asthma. Based on 2015 air monitoring data, Maryland is extremely close to meeting the new EPA ozone standard. Fifteen of the State's eighteen ozone monitors are already below the new ozone standard of 70 parts per billion (ppb). Modeling demonstrates that the Department's air quality regulations and initiatives will continue to reduce ozone levels and by 2017 the remaining three monitors will be below the new ozone standard as well.

Research shows that pollution from upwind states accounts for up to 70 percent of the ozone levels recorded in Maryland. This air pollution that floats from state to state affects almost every state east of the Mississippi River. On November 16, 2015, EPA proposed an update to the Cross State Air Pollution Rule (CSAPR Update). This rule, which requires reductions by the summer of 2017, is a critical component of Maryland's plan to further reduce ozone levels across the State.

Over the past few years, Maryland has played a critical role in bringing together approximately 25 states to see where progress could be made in addressing the issue of transported air pollution. This collaborative effort with Air Directors and Commissioners in many states is looking at additional regional control efforts for power plants, vehicles and other sources of air pollution.

## Maryland's Improving Particle Levels



## The Healthy Air Act

The Maryland Healthy Air Act, adopted by the Maryland General Assembly in 2006 was designed to bring Maryland into compliance with federal air quality standards for ozone and fine particles. The Healthy Air Act requires reductions in nitrogen oxides ( $\text{NO}_x$ ), sulfur dioxides ( $\text{SO}_2$ ), mercury emissions and greenhouse gases. The Healthy Air Act reduced  $\text{NO}_x$  emissions by about 75 percent and  $\text{SO}_2$  emissions by about 85 percent from the 2002 baseline. Ninety percent of mercury emissions were controlled by 2013.



## **NO<sub>x</sub> Regulations for Power Plants Provide Enhanced Public Health Protections**

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Building on the success of the Healthy Air Act, Maryland has implemented enhanced NO<sub>x</sub> regulations for coal-fired power plants in 2015 that are amongst the toughest in the country. These regulations are part of a series of initiatives that will allow Maryland to attain and maintain compliance with both the previous and new health-based, federal standard for ozone pollution. The regulations are being implemented in two phases (Phase I and Phase II). Phase I, which was implemented during the summer 2015 ozone season, requires that coal-fired power plants meet a system-wide NO<sub>x</sub> emission limit and ensures that installed pollution controls are optimized and continuously operated to minimize emissions during the ozone season. Phase II contains four options for power plants to further reduce NO<sub>x</sub> emissions starting as early as 2016. The additional NO<sub>x</sub> Reductions in 2020 will be significant.

## **Cross State Air Pollution Rule Update**

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On November 16, 2015, the EPA proposed the CSAPR Update to address the interstate transport of ozone, under the 2008 ozone National Ambient Air Quality Standards. Twenty three states were included in the CSAPR Update, which is scheduled to become effective for the 2017 ozone season. Starting in 2017, this rule requires power plants to reduce emissions that contribute to ozone and fine particle pollution in other states, providing up to \$1.2 billion in health benefits to millions of Americans. Addressing upwind contributions of transported ozone can help improve Maryland's, and all states on the east coast, air pollution levels which means better public health protection. While the CSAPR Update provides great benefits for the 23 states, Maryland's enhanced NO<sub>x</sub> regulations for power plants surpass the emission reductions required by the CSAPR Update rule. Maryland's power plants are already required by State regulations to operate at levels that are tougher than the federal limit.

## **Greenhouse Gas Emissions Reductions**

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On April 4, 2016, the Greenhouse Gas Emissions Reduction Act was signed into law. This law reauthorizes and enhances the 2009 Greenhouse Gas Emission Reduction Act by requiring Maryland to reduce statewide greenhouse gas emissions by 40 percent from 2006 levels by 2030. This bipartisan legislation, which was supported by the Maryland Department of the Environment, is based on a recommendation of the Maryland Commission on Climate Change. The law is expected to help create and maintain tens of thousands of jobs and represents a balanced, science-based approach to reduce carbon pollution.

In October 2015, the MDE issued a status report on greenhouse gas emission reductions which shows the State is on track to achieve the initial 25% reduction by 2020 required by the original 2009 law.

## **Science Update**

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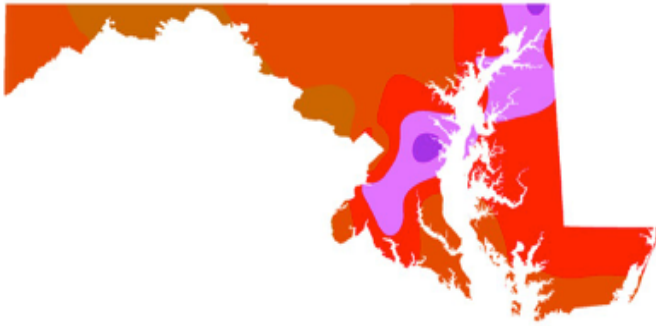
MDE works with the University of Maryland to conduct air pollution research. This 30-year partnership has helped the State achieve its clean air goals. One of the most critical findings for the 2015 research effort is that the State appears to have reached a "tipping point" for ozone air pollution. The amount of NO<sub>x</sub> pollution has been so reduced in Maryland that we have effectively altered the composition of the atmosphere. In the past, significant reductions in pollution emissions were required to show an improvement in air quality. Recently, studies have demonstrated that smaller reductions in air pollutants, especially NO<sub>x</sub> emissions, appear to result in greater ozone reductions.



## Maryland's Improving Ozone Levels

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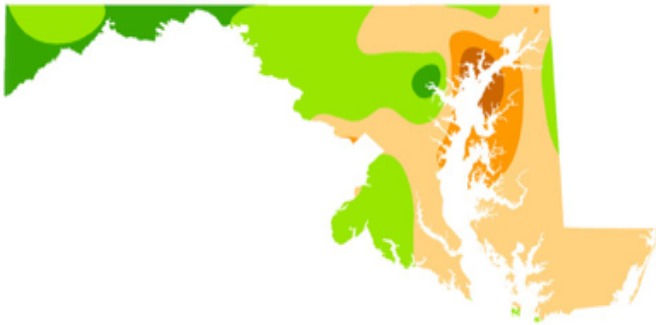
2000



2005



2010



2015



Air quality maps can help to visualize Maryland's air quality improvements. The air quality maps illustrate how ozone levels have improved and gone from widespread unhealthy air quality to good air quality for all of Maryland. Deep purples and reds depict unhealthy ozone air quality, orange and yellow shows improving air quality and green shows good, healthy air.

Air quality is forecasted throughout the region to inform the public how to protect their health and take actions that are better for the environment. Visit <http://www.mde.state.md.us/air> to check today's air quality forecast and modify your plans if unhealthy air quality is predicted. Protect yourself and others in your care, by taking the appropriate actions. Making small changes in your lifestyle at home, at work, and on the road can make a big difference.

*"The hard work, strong controls and steady investments made for clean air are paying off with remarkable progress that has us poised to meet air quality standards across the state for the first time ever," said Maryland Department of the Environment Secretary Ben Grumbles. "But this will be a short celebration if we do not continue to make improvements needed to meet a more stringent ozone standard. Much more needs to be done, within the state and beyond, to consistently improve and maintain Maryland's air quality."*

